

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA

Alexandria Division

DIALECT, LLC,
Plaintiff,

UNDER SEAL

v.

Civil No. 1:23cv581 (DJN)

AMAZON.COM, INC., *et al.*,
Defendants.

MEMORANDUM OPINION

The Court previously resolved the first of two motions for summary judgment in this patent case filed by Defendants Amazon.com, Inc. and Amazon Web Services, Inc. (together, “Amazon”). (ECF No. 393.) Now, this matter comes before the Court on the second of those motions (ECF No. 306), in which Amazon raises three grounds for summary judgment. On Amazon’s first ground, the Court agrees that insufficient evidence of scienter precludes liability under § 271(f), and therefore, Dialect cannot recover damages related to foreign sales. On its second ground, the Court concludes that Amazon has not proved its enablement defense with sufficient rigor at this stage to warrant summary judgment; the issue of enablement must be presented to the jury. Finally, on Amazon’s third challenge regarding pre-suit damages, the Court finds no genuine dispute between the parties following the Court’s decision on Amazon’s first motion for summary judgment; consequently, the Court denies this argument as moot. Accordingly, the Court will grant in part and deny in part Amazon’s second summary judgment motion.¹

¹ On July 4, 2024, Amazon requested a hearing on its second motion for summary judgment. (ECF No. 314.) Because the Court finds that the parties’ thorough submissions

I. BACKGROUND

The facts of this case have been related elsewhere. See, e.g., *Dialect, LLC v. Amazon.com, Inc. (1st Summ. J. Op.)*, 2024 WL 3733437, at *1–7 (E.D. Va. July 30, 2024) (ECF No. 407).² As such, the Court assumes the reader’s familiarity with the underlying proceedings and the Asserted Patents, so this section recounts only that necessary to resolve the current motion. In short, Amazon owns, sells and develops a proprietary virtual assistant, Alexa, that analyzes and responds to spoken words. Amazon incorporates Alexa into popular products like Amazon Echo and Amazon Fire TV. Dialect claims that Alexa, and therefore Amazon, infringes patents that had been assigned to Dialect by a now-defunct firm called VoiceBox, LLC.

Accordingly, Dialect sued.

Initially, Dialect asserted seven different patents. At the motion to dismiss stage, Senior District Judge T.S. Ellis, III invalidated one of those patents, U.S. Patent No. 9,031,845, as being drawn to patent-ineligible subject matter. *Dialect, LLC v. Amazon.com, Inc.*, 701 F. Supp. 3d 332, 342 (E.D. Va. 2023). After this case was transferred to the undersigned (ECF No. 137), the Court dismissed another patent, U.S. Patent No. 8,140,327 (the “327 Patent”), upon finding that Amazon’s products did not infringe that patent as a matter of law. *1st Summ. J. Op.*, 2024 WL 3733437, at *19–22. Five patents (the “Asserted Patents”) thus remain in controversy.³

² To eliminate any need for oral argument, the Court will deny Amazon’s motion for a hearing. Loc. Civ. R. 7(J); Fed. R. Civ. P. 78(b).

³ This Court’s prior rulings in this case provide alternative and helpful sources for the facts. See *Dialect, LLC v. Amazon.com, Inc.*, 701 F. Supp. 3d 332, 336–38 (E.D. Va. 2023) (ruling on Amazon’s motion to dismiss); *id.*, 2024 WL 1859806, at *1 (E.D. Va. Apr. 29, 2024) (construing claim terms); *id.*, 2024 WL 3607441, at *1–2 (E.D. Va. July 23, 2024) (declining to exclude a witness).

³ The Asserted Patents are U.S. Patent Nos. 7,693,720 (the “720 Patent”); 8,015,006 (the “006 Patent”); 8,195,468 (the “468 Patent”); 9,263,039 (the “039 Patent”); and 9,495,957 (the “957 Patent”).

II. STANDARD

The summary judgment posture governs. Accordingly, the movant prevails if it can demonstrate the absence of any “genuine dispute of material fact” and that it stands “entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). All “justifiable inferences” must be drawn in favor of the party opposing summary judgment, *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986), and the Court must not “weigh the evidence[] or resolve factual disputes in [Amazon’s] favor.” *Hensley ex rel. North Carolina v. Price*, 876 F.3d 573, 579 (4th Cir. 2017).

Summary judgment can be sought on any claim, defense or issue, but the nature of the parties’ burdens of proof at trial determine how a summary judgment motion should be resolved. When a defendant seeks summary judgment on an issue constituting part of the plaintiff’s case in chief, that defendant need only identify “an absence of evidence” to support the plaintiff’s case, at which point the plaintiff must respond by producing evidence that, if believed by a reasonable jury, would justify finding in the plaintiff’s favor at trial. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322–23, 325 (1986).

Summary judgment on an affirmative defense, like Amazon’s enablement defense, involves a different standard. In that case, the defendant “must conclusively establish all essential elements of [its] defense” and carry its burden of production. *Ray Commc ’ns, Inc. v. Clear Channel Commc ’ns, Inc.*, 673 F.3d 294, 299 (4th Cir. 2012). Additionally, Amazon’s enablement defense must overcome the Asserted Patents’ presumption of validity by proving all facts underpinning that defense by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. 91, 96–97 (2011); see *Baxalta Inc. v. Genentech, Inc.*, 81 F.4th 1362, 1365 (Fed. Cir. 2023) (applying *i4i*). Because the Court must “view the evidence presented [on summary judgment] through the prism of the substantive evidentiary burden,” Amazon must convince the Court that any reasonable jury would have to find its evidence of non-enablement clearly and

convincingly proven. *Anderson*, 477 U.S. at 254–55. Dialect, on the other hand, needs only to persuade the Court that a reasonable jury could find the facts supporting non-enablement less than clear and convincing if Amazon’s evidence were disregarded and Dialect’s accepted.

III. ANALYSIS

Amazon’s motion advances three arguments: first, that Amazon has no liability as a matter of law for exporting “components of a patented invention” under 35 U.S.C. § 271(f); second, that each of Dialect’s claims rests on patents that must be found invalid for lack of enablement under 35 U.S.C. § 112(a); and third, that Dialect cannot recover pre-suit damages for three patents, because Dialect violated the “marking” requirement of 35 U.S.C. § 287(a). The Court considers each in turn.

A. Infringement Abroad

Dialect pleads, as relevant here, that Amazon infringes the Asserted Patents by uploading Alexa software onto foreign servers and into “the cloud,” such that foreign Amazon devices practice the patents’ claimed inventions when accessing that U.S.-programmed code. Courts have long held, however, that American patent rights cannot “operate beyond the limits of the United States,” *Brown v. Duchesne*, 60 U.S. (19 How.) 183, 195 (1856), and are not infringed by “acts wholly done in a foreign country.” *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915). Now, as then, the principle that “no infringement occurs when a patented product is made and sold in another country” governs almost all of patent litigation. *Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 441 (2007). In 1984, Congress crafted the only two exceptions to that rule: 35 U.S.C. § 271(f)(1) and (2). *Id.* at 444; Patent Law Amendments Act of 1984, Pub. L. No. 98-622, § 101(a), 98 Stat. 3383, 3383. Dialect’s infringement-by-uploading theory seeks to invoke those two provisions, but Amazon contends that Dialect cannot avail itself of either one.

Before embarking on its substantive analysis, the Court details the statutory history of § 271(f). Congress enacted § 271(f) as “a response” to the Supreme Court’s decision in *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972). S. Rep. No. 98-633, at 2–3 (1984); *Microsoft*, 550 U.S. at 442–45 (same). *Deepsouth* interpreted 35 U.S.C. § 271(a), which at that time deemed a person who made, used or sold “any patented invention, within the United States” a “direct” infringer. 406 U.S. at 522, 527 (quoting 35 U.S.C. § 271(a) (1970)). *Deepsouth*, the petitioner in that case, manufactured all of the components of a patented combination within the United States. *Id.* at 523. None of the components stood subject to a patent by itself; infringement occurred only when a person put the parts together to form the patented machine. *Id.* *Deepsouth* exported these components to its customers abroad, who would then build the patented machine outside of the United States — a scheme that *Deepsouth* admitted was “motivated by a desire to avoid” the patent laws. *Id.* at 523–24 & n.5. *Deepsouth* sought “judicial approval” of this practice over the objection of *Laitram*, the respondent and patent owner. *Id.* at 524. The Supreme Court agreed with *Deepsouth*. *Id.* at 525. As the Court explained, “a combination patent can be infringed only by combination,” and the infringing combination at issue was made outside of the United States and thus beyond the reach of § 271. *Id.* at 532.

As the Senate Judiciary Committee correctly understood, *Deepsouth* “interpreted the patent law not to make it infringement when the final assembly and sale [of a patented combination] is abroad.” S. Rep. No. 98-633, at 3. At least some members of Congress believed that a legislative response was necessary to avoid “the subterfuge . . . allowed under the *Deepsouth* [decision],” and they proposed a statute that they intended to “amend[] the patent law” to impose liability in cases where “components are supplied for assembly abroad to

circumvent a patent.” *Id.* Section 271(f) was the result. Now, the Patent Act contains two forms of liability for exporting parts of patented inventions:

- (1) Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to *actively induce* the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.
- (2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, *knowing* that such component is so made or adapted and *intending* that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

35 U.S.C. § 271(f) (emphasis added). Both provisions require a defendant to “suppl[y]” at least one “component of a patented invention” “in or from the United States.” In addition, as emphasized above and unlike the “strict-liability offense” of direct infringement, *Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 639 (2015), both paragraphs of § 271(f) require specific mental states.

Amazon believes that it lacks any liability under § 271(f). Amazon argues first that Dialect can identify no “component” that Amazon “supplies . . . in or from the United States” that, when combined with other components abroad, results in a combination that would infringe if made domestically; and second, that Dialect cannot prove that Amazon had the requisite mental state to satisfy either paragraph of § 271(f). Amazon’s second argument carries force. For the reasons that follow, the Court finds that Dialect has not met its burden of production to prove Amazon’s knowledge or intent at trial. The Court will therefore grant partial summary judgment on Dialect’s § 271(f) theory without addressing Amazon’s first argument.

1. Amazon Lacks Scienter Under § 271(f)(1)

Section 271(f)(1) recites no express mental state requirement. Instead, it provides that any person who “supplies . . . components of a patented invention . . . in such manner as to actively induce the combination” of those components abroad in an infringing way, “shall be liable as an infringer.” 35 U.S.C. § 271(f)(1). However, the requisite scienter can be determined by analogy. Section 271(f)(1) bears more than a passing resemblance to 35 U.S.C. § 271(b), which provides that “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” And, with respect to § 271(b), the Supreme Court has held that “at least some intent is required.” *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 760 (2011). In *Global-Tech*, the Supreme Court concluded that “induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement,” or, at least, that the inducer was willfully blind to “the infringing nature” of the induced acts. *Id.* at 766, 771. Willful blindness, as the *Global-Tech* Court confirmed, has a “limited scope that surpasses recklessness and negligence”: “(1) The defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact.” *Id.* at 769. As detailed below, the parties present no persuasive reason why a different standard should apply to § 271(f)(1); indeed, the Court can find none. On the contrary, basic principles of statutory interpretation strongly support giving the phrase “actively induce” the same meaning in both § 271(b) and § 271(f)(1). See Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts* 170–73 (2012) (describing the “presumption of consistent usage”). The Court accordingly concludes that the scienter requirement described in *Global-Tech* — knowledge of infringing nature or willful blindness thereto — applies to § 271(f)(1).

The Court rejects the parties’ attempts to escape *Global-Tech*. Amazon contends that Dialect cannot make the relevant showing, because Amazon believes in good faith that the

Asserted Patents “are invalid.” (ECF No. 313 (“Amazon’s Br.”) at 12.) Such an argument has no relevance here. Just as “‘I thought it was legal’ is no defense” at common law, “belief in invalidity will not negate the scienter required under § 271(b).” *Commil*, 575 U.S. at 646. The statutory language “requires intent to ‘bring about the desired result,’ which is infringement.” *Id.* at 642.

Dialect, for its part, represents Federal Circuit precedent as holding that § 271(f)(1) “merely requires proof that the accused infringer ‘had the specific intent to combine the components’ of the accused products outside the U.S.” (ECF No. 348 (“Dialect’s Opp.”) at 9 (quoting *Promega Corp. v. Life Techs. Corp. (Promega II)*, 875 F.3d 651, 654 (Fed. Cir. 2017) (on remand).) That, too, misreads the case law.

The original *Promega* decision, which the Federal Circuit adhered to in relevant part on remand from the Supreme Court, *Promega II*, 875 F.3d at 654, decided that § 271(f)(1) liability extended to companies that shipped components “overseas to themselves or their foreign subsidiaries” rather than limiting that liability exclusively to “shipping components overseas to third parties.” *Promega Corp. v. Life Techs. Corp. (Promega I)*, 773 F.3d 1338, 1353 (Fed. Cir. 2014).⁴ By stating that a plaintiff needed to prove only intent to combine, *Promega I* did not decide *sub silentio* that a plaintiff did not need to prove knowledge that the combination would infringe. Judicial opinions “dispose of discrete cases and controversies[,] and they must be read with a careful eye to context.” *Nat'l Pork Prods. Council v. Ross*, 598 U.S. 356, 373–74 (2023). Reading *Promega I* to reject *Global-Tech*’s scienter requirement would flout that guidance by

⁴ A separate holding of *Promega I* — that the supply of a single component could suffice for liability under § 271(f)(1), 773 F.3d at 1353 — was reversed by the Supreme Court. *Life Techs. Corp. v. Promega Corp.*, 580 U.S. 140, 145 (2017). This reversal resulted in the Federal Circuit’s decision on remand in *Promega II*.

needlessly bringing Federal Circuit precedent on § 271(f)(1) into deep tension with Supreme Court precedent on § 271(b). The Court will not so hold.

Applying *Global-Tech*, the Federal Circuit has held that § 271(b)'s scienter requirement can be satisfied with proof of "the defendant's subjective state of mind, whether actual knowledge or the subjective beliefs (coupled with action to avoid learning more) that characterizes willful blindness." *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1286 (Fed. Cir. 2020). Section 271(f)(1), read consistently with *Global-Tech*, *TecSec* and *Promega I*, thus requires a plaintiff to prove that the defendant shipped "all or a substantial portion" of an invention's components with the specific intent that those components be combined and the knowledge that the resulting combination would infringe (or willful blindness to that result).

Bringing those teachings to bear on the facts of this case shows that Dialect has not met its burden of production. First, Dialect creates no jury question as to willful blindness. That standard requires evidence that Amazon took "deliberate actions to avoid confirming a high probability of wrongdoing." *Global-Tech*, 563 U.S. at 769. Dialect identifies no such deliberate acts; indeed, it argues willful blindness in wholly conclusory terms. (ECF No. 352 ("Dialect's Sealed Opp.") at 12.) That does not satisfy Dialect's burden.

Second, Dialect creates no genuine jury question as to actual knowledge. Dialect's evidence shows that, between 2011 and 2018, Amazon met with VoiceBox, assessed its invention and discussed VoiceBox's portfolio of patents. (Dialect's Sealed Opp. at 11.) In doing so, as Dialect points out, [REDACTED] — [REDACTED]

[REDACTED] [REDACTED] (Id. (quoting discovery materials).) Dialect asserts that a reasonable jury "could infer

from those facts that Amazon not only knew about the [’720 and ’957 Patents], but knew or was willfully blind to the fact that it and its customers infringed them.” (*Id.* at 11–12.)

The Court disagrees. Knowledge of VoiceBox’s portfolio perhaps supports an inference that Amazon knew that the ’720 and ’957 Patents existed, and it may indicate that some Amazon employee considered the claims asserted here. But knowledge of “text, standing alone, is not sufficient to prove knowledge of . . . legal effect.” *Parker v. Martin (In re Parker)*, 653 B.R. 765, 780 n.15 (E.D. Va. 2023) (Ellis, J.) (emphasis removed). The parties’ vigorous litigation of claim construction and noninfringement demonstrate the difficulty of the infringement decision that the jury in this case will have to make. The Court does not believe that a reasonable juror could conclude that Amazon made this determination without leaving a scrap of evidence behind.

To be sure, awareness of VoiceBox’s patent portfolio, combined with knowledge of a general conceptual resemblance, might suffice to plausibly plead knowledge of infringement at the Rule 12(b)(6) stage.⁵ On summary judgment, these facts might support an inference of negligence — i.e., an inference that a reasonably diligent company would have investigated the situation and discovered its infringement. But recklessness would be a stretch, and knowledge lies entirely beyond the pale. To arrive at actual knowledge of infringing use, Dialect would have to ask the jury to *infer* knowledge of the ’720 and ’957 Patents, *infer* knowledge of those patents’ claims, *infer* that Amazon asked whether Alexa infringed and then *infer* that Amazon’s answer to its question was “yes.”

⁵ Some district courts have held to the contrary. See, e.g., *Atlas Glob. Techs., LLC v. Sercomm Corp.*, 638 F. Supp. 3d 721, 728 (W.D. Tex. 2022) (presenting it as the rule that “general knowledge of a patent portfolio without more is insufficient even to plausibly allege knowledge of a particular asserted patent.”) (cited by ECF No. 385 (“Amazon’s Reply”) at 11). Other district courts have disagreed and expressed skepticism of any “bright-line rule” in this context. *SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 609–10 (D. Mass. 2018). The Court need not resolve this issue here.

To put a finer point on it, this theory requires too many speculative inferences to present a triable issue. No jury question exists when a party's evidence rests on "mere speculation" produced by "building [] one inference upon another." *Othentec Ltd. v. Phelan*, 526 F.3d 135, 140 (4th Cir. 2008). On the facts of this case, no reasonable juror could come away from Dialect's spare evidence with more than a suspicion that Amazon actually knew "that [its] induced acts constitute patent infringement." *Global-Tech*, 563 U.S. at 766. That cannot satisfy Dialect's burden of production. As a necessary consequence, Dialect cannot satisfy § 271(f)(1)'s scienter requirement as a matter of law.

2. Amazon Lacks Scienter Under § 271(f)(2)

The Court has now determined that Dialect creates no genuine dispute regarding the scienter requirement of § 271(f)(1). That finding may dispose of Dialect's case for liability under § 271(f)(2), but only if that provision contains an analogous scienter requirement. After considering the statutory text and the structure of § 271(f), the Court finds that it does.

Section 271(f)(2) creates liability if the defendant supplies "any component of a patented invention" from the United States. That component, however, must be "especially made or especially adapted for use in the invention," and the defendant must act "knowing that such component is so made or adapted." Amazon argues that this provision incorporates the scienter required for contributory infringement under § 271(c).

A cursory inspection of the two sections reveals many parallels between the two. Here, for example, is § 271(c), with all analogous portions set in italics:

Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, *knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use*, shall be liable as a contributory infringer.

And here is § 271(f)(2), run through the same filter:

Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is *especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use*, where such component is uncombined in whole or in part, *knowing that such component is so made or adapted* and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

The two provisions do not make a perfect pair; as the Federal Circuit has stated, contributory infringement doctrine cannot be blindly applied to § 271(f)(2). *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1368 (Fed. Cir. 2001). However, legislative history confirms what should be clear to the eye: Section 271(f)(2)'s knowledge requirement "comes from existing section 271(c)." S. Rep. No. 98-663, at 7.⁶ The Court would be remiss to disregard the "longstanding interpretive principle" that when statutory text "is obviously transplanted from another legal source, it brings the old soil with it." *Taggart v. Lorenzen*, 587 U.S. 554, 560 (2019) (cleaned up). A litigant seeking to ascribe different meanings to these words has a hard row to hoe.

Amazon's scienter argument finds support in precedent, history and statutory text. First and foremost, Amazon's argument relies on persuasive and entrenched Supreme Court case law interpreting 35 U.S.C. § 271(c). In *Aro Manufacturing Co. v. Convertible Top Replacement Co.*, the Supreme Court construed that subsection's "element of knowledge." 377 U.S. 476, 488 (1964). Because the statute then, as now, created liability only for "sale of a component of a patented combination 'knowing the same to be especially made or especially adapted for use in

⁶ Federal Circuit judges have acknowledged this fact. See, e.g., *Zoltek Corp. v. United States*, 672 F.3d 1306, 1334 n.6 (Fed. Cir. 2012) (en banc) (Dyk, J., dissenting) ("The language of section 271(f) itself mimics the language of the indirect infringement provisions of sections 271(b) and (c).").

an infringement,” the Supreme Court asked whether this text required knowledge that the component was patented and that its use would result in infringement. *Id.* Construing the very text that Congress later transplanted into § 271(f)(2), the *Aro* court said that the answer was “yes.” It has thus been the case since 1964 that § 271(c) “require[s] a showing that the alleged contributory infringer knew that the combination for which his component was especially designed was both patented and infringing.” *Id.*⁷ The same text in § 271(f)(2) compels the same result.

The remainder of § 271(f)(2)’s text makes this result more and not less likely. Section 271(c) states that a contributory infringer must act with knowledge, but it says nothing about specific intent. Section 271(f)(2), on the other hand, requires that a defendant act “intending that [its supplied] component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States.” This language does not lack ambiguity. Perhaps the statute, of its own force, requires not only that the defendant intend the combination but also that the defendant intend that the combination be infringing.⁸ Other interpretations could be grammatically valid and persuasive. However, *Aro* renders the question moot. The Court sees no meaningful difference between acting with a specific intent to

⁷ Indeed, *Aro*’s holding has become so entrenched that the Supreme Court’s reasoning for its chosen scienter standard for induced infringement rested in large part on the need for consistency between § 271(b) and (c). *Global-Tech*, 563 U.S. at 761–66. Because the two provisions shared “a common origin,” the Court said, it would be “strange to hold that knowledge of the relevant patent is needed under § 271(c) but not under § 271(b).” *Id.* at 765.

⁸ Legislative history would support such a reading. The Senate Judiciary Committee understood the provision that became § 271(f)(2) to require proof of “an intent that the components will be combined outside of the United States in a manner that would infringe if the combination occurred within the United States” — suggesting that, at the time of enactment, that clause was understood to enact a single, integrated specific intent requirement. S. Rep. No. 98-663, at 7 (1984).

infringe and acting with the knowledge that an intended combination will infringe. This language only reinforces the Court’s view that the statutory text requires, at minimum, knowledge that the combination a defendant intends to make would be an infringing one.

The Court, in short, agrees with the three-part § 271(f)(2) mental state test articulated by other district courts. Under that test, a plaintiff must prove that the defendant “(i) intended the combination of components to occur outside the United States, (ii) knew that the combination it intended was covered by a United States patent, and (iii) knew that the combination it intended would be infringing if it occurred in the United States.” *Veeco Instruments Inc. v. SGL Carbon, LLC*, 2017 WL 5054711, at *22 (E.D.N.Y. Nov. 2, 2017) (citing and quoting *WesternGeco L.L.C. v. ION Geophysical Corp.*, 953 F. Supp. 2d 731, 749 (S.D. Tex. 2013)⁹); accord *Whitewater W. Indus., Ltd. v. Pac. Surf Designs, Inc.*, 2019 WL 4452986, at *12 (S.D. Cal. Sept. 16, 2019).

Dialect cannot rely on *Waymark* to avoid this logical result. Dialect insists that *Waymark* “held that [§ 271(f)(2)] merely requires a showing that the accused infringer shipped the components of the infringing device ‘with the intent that they be combined.’” (Dialect’s Opp. at 10 (quoting *Waymark*, 245 F.3d at 1368).) But Dialect misreads *Waymark* the same way that it misread *Promega I*. That case did not hold that intent to combine was the only mental state required by § 271(f)(2). Instead, *Waymark* held that § 271(f)(2)’s intent clause does not require “an actual combination of the components” to occur; instead, the statute requires “a showing that the infringer shipped them with the *intent* that they be combined.” *Waymark*, 245 F.3d at 1368 (emphasis added). The case distinguished § 271(c) on the grounds that § 271(c)’s use of the term

⁹ On appeal in *WesternGeco*, the parties did not challenge the district court’s intent standard. *WesternGeco L.L.C. v. ION Geophysical Corp.*, 791 F.3d 1340, 1348 & n.5 (Fed. Cir. 2015). The matter’s long afterlife on appeal concerned questions not implicated by this case. See *WesternGeco LLC v. ION Geophysical Corp.*, 585 U.S. 407, 411–12 (2018) (summarizing procedural history).

“*contributory* infringer” logically required a predicate “act of direct infringement” under § 271(a). *Id.* Section 271(f)(2), however, made violators liable for ordinary “infringement” rather than “*contributory* infringement,” thereby suggesting that no underlying direct infringement needed to occur. *Id.*

Waymark thus does not hold that a defendant can violate § 271(f)(2) without knowing of an infringing result or intending to cause infringement. Like *Promega I*, *Waymark*’s language should not be overread to suggest that the Federal Circuit has adopted a reading that would run counter to the entire corpus of indirect infringement case law. Indeed, because *Waymark* held that liability under § 271(f)(2) requires only intent to combine rather than actual combination, it would be natural to conclude by analogy that the statute requires only intent to infringe rather than actual infringement. Thus, despite Dialect’s protestations that *Waymark* resolves the question of intent, the case hurts Dialect at least as much as it helps.¹⁰

In conclusion, the Court finds that liability under § 271(f)(2) requires a defendant to act with the intent to cause a combination that the defendant knows would be infringing if it occurred in the United States. As explained in the previous section, Dialect has no evidence that would permit an inference of such knowledge. Accordingly, the Court holds that Dialect cannot establish liability under § 271(f)(2) as a matter of law.

¹⁰ Dialect also faults the *Veeco* and *Whitewater* courts for failing to distinguish *Waymark*. (Dialect’s Opp. at 10 n.4.) But both cases acknowledged *Waymark*’s holding and, like this Court, did not find that *Waymark* foreclosed a knowledge-of-intent requirement. The *Whitewater* court recognized, citing *Waymark*, that § 271(f)(2) and § 271(c) “are not the same” — but it correctly concluded that § 271(f)(2)’s “knowing” clause incorporated the Supreme Court’s decision in *Aro*. 2019 WL 4452986, at *11–12 & n.12. Likewise, the *Veeco* court recognized *Waymark*’s holding, and it acknowledged that § 271(f)(2) “does not perfectly parallel” any of the other provisions of § 271, including § 271(c), even as it concluded that the statute required knowledge that the intended combination would infringe. 2017 WL 5054711, at *19 n.48, *22. The reasoning in those cases is not flawed for failing to distinguish *Waymark*’s language rather than its logic.

B. Enablement

Amazon next contends that all asserted claims of the '006, '720, '957, '468 and '039 Patents are not enabled by their respective specifications and therefore cannot ground Dialect's infringement claim. (Amazon's Br. at 12.) The Court finds Amazon's contentions insufficient to overcome its heavy burden on this affirmative defense.

1. The Applicable Law

The Patent Act requires every patent's specification to disclose "the manner and process of making and using [the claimed invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." 35 U.S.C. § 112(a). This requirement, known as "enablement," has long been present in the patent laws, and the Supreme Court has enforced it in a continuous line of cases dating back to 1846. *Amgen Inc. v. Sanofi*, 598 U.S. 594, 604–06 (2023). This doctrine, as the Supreme Court recently reaffirmed, requires that a patent claiming "an entire class of processes . . . must enable a person skilled in the art to make and use the entire class." *Id.* at 610. "In other words, the specification must enable the full scope of the invention as defined by its claims. The more one claims, the more one must enable." *Id.*

Nevertheless, the courts have never required a patentee to disclose "how to make and use every single embodiment within a claimed class." *Id.* at 610–11. Instead, "a specification may call for a reasonable amount of experimentation," with reasonableness to be determined based on "the nature of the invention and the underlying art." *Id.* at 612.

Procedurally, a patent challenger must begin an enablement challenge by identifying "evidence that some experimentation is needed to practice the patented claim." *Amgen Inc. v. Sanofi, Aventisub LLC (Sanofi-Aventisub)*, 987 F.3d 1080, 1084 (Fed. Cir. 2021), *aff'd sub nom. Amgen Inc. v. Sanofi*, 598 U.S. 594 (2023). That threshold showing "routinely involve[s]

concrete identification of at least some embodiment or embodiments asserted not to be enabled.”

McRO, Inc. v. Bandai Namco Games Am. Inc. (McRO II), 959 F.3d 1091, 1100 (Fed. Cir. 2020).

Once the challenger makes that threshold showing, it remains to determine “whether the amount of [] experimentation [identified] is either ‘undue’ or sufficiently routine such that an ordinarily skilled artisan would reasonably be expected to carry it out.” *Id.* at 1084–85 (quoting *Alcon*, 745 F.3d at 1188). Longstanding Federal Circuit precedent identifies eight non-exclusive factors that inform (but do not circumscribe) that inquiry:

- (1) the quantity of experimentation necessary,
- (2) the amount of direction or guidance presented,
- (3) the presence or absence of working examples,
- (4) the nature of the invention,
- (5) the state of the prior art,
- (6) the relative skill of those in the art,
- (7) the predictability or unpredictability of the art, and
- (8) the breadth of the claims.

In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988).¹¹ Critically, when applying the *Wands* factors, “it is important to consider the quantity of experimentation that would be required to make and use, not only the limited number of embodiments that the patent discloses, but also the full scope of the claim.” *Sanofi-Aventisub*, 987 F.3d at 1086.

2. Amazon’s Theories of Non-Enablement

a. Speech Recognition

Amazon presents two arguments for non-enablement. First, Amazon claims, the Asserted Patents do not enable their speech recognition elements. To demonstrate that the Asserted Patents fail, Amazon focuses on [REDACTED], which, in Amazon’s telling, Dialect contends satisfies the Asserted Patents’ requirement of “a speech recognition engine.” (ECF No. 312 (“Amazon’s Sealed Br.”) at 14–15 (quoting the ’006,

¹¹ The Supreme Court’s *Amgen* decision did not refer to the *Wands* factors. Importantly, however, the Federal Circuit “do[es] not interpret *Amgen* to have disturbed [its] prior enablement case law, including *Wands* and its factors.” *Baxalta Inc. v. Genentech, Inc.*, 81 F.4th 1362, 1367 (Fed. Cir. 2023).

'720, '957, '468 and '039 Patents.) Amazon only developed this technology [REDACTED], long after the Asserted Patents' effective dates, and it argues that the Asserted Patents disclose nothing that would "enable a person of ordinary skill in the art to practice the accused [REDACTED] speech recognition as of the effective filing dates in 2002 and 2005." (*Id.* at 16.)

Amazon's argument fails at this first step, as its evidence does not clearly and convincingly demonstrate beyond reasonable dispute that "some experimentation is needed to practice the patented claim." *Sanofi-Aventisub*, 987 F.3d at 1084. Because § 112(a) does not require specifications to enable "matter outside the claims," Amazon must interpret the claims, identify "the precise scope of the claimed invention," and point to "embodiments of the invention" that the specification allegedly cannot enable. *McRO II*, 959 F.3d at 1100. Amazon characterizes Dialect as contending that Alexa's ASR, which uses [REDACTED] technology, falls within the scope of the Asserted Patents. (Amazon's Sealed Br. at 15.) Its arguments draw the Asserted Patents so broadly that they cover Alexa's ASR unit in its entirety. However, Dialect disclaims such an overbroad construction. Instead, Dialect contends that "only specific features of Alexa's ASR are covered by the asserted claims." (Dialect's Opp. at 17.)

Amazon paints Dialect as arguing that "each [Asserted Patent] covers the entire class of speech recognition processes." (Amazon's Br. at 14.) That is not true. To give just one example, Claim 1 of the '720 Patent does not recite (and therefore need not enable) the concept of speech recognition writ large, or even, as Amazon would have it, the recognition of "at least one of words or phrases . . . using data received from a plurality of domain agents." (Amazon's Br. at 14 (quoting '720 Pat. col. 32, ll. 43–46).)¹² That claim covers only forms of speech

¹² Analogous problems plague Amazon's analysis of the "speech recognition" elements of the '006, '957, '468 and '039 Patents' claims. Because Amazon attacks the enablement of all

recognition that “recognize[] at least one of words or phrases from [an] electronic signal using . . . a plurality of dictionary and phrase entries that are dynamically updated based on at least a history of a current dialog and one or more prior dialogs associated with the user.” ’720 Pat. col. 32, ll. 43–50. It is this technology — “the novel aspect of the claimed invention” — that “the specification must reasonably teach how to make and use,” *McRO II*, 959 F.3d at 1102, rather than “the use of neural networks” as such. (Amazon’s Sealed Br. at 16.) Patents, in short, do not need to teach techniques that they do not claim. *See also infra* § III.B.2.b (explaining that specifications can rely on artisans’ prior knowledge to enable non-novel aspects of their claims). If little experimentation would be needed to apply the Asserted Patents’ novel aspects to new techniques for recognizing words, the patents are enabled.

The question, in short, is not whether the Asserted Patents enable the full scope of Alexa. Instead, the question asks whether they enable the full scope of their claimed embodiments. With respect to the portion of Claim 1 of the ’720 Patent discussed in the preceding paragraph, the scope of the limitation encompasses speech recognition accomplished by using “a plurality of dictionary and phrase entries that are dynamically updated based on at least a history of a current dialog and one or more prior dialogs associated with the user.” ’720 Pat. col. 32, ll. 47–50. Amazon cannot read that portion of the limitation out of the claim, and it points to no facts showing that the ’720 Patent’s specification does not enable these aspects of Alexa. It thus presents no evidence — let alone conclusive, clear and convincing evidence — that experimentation would be required to enable all of the embodiments of the speech recognition technology that the Asserted Patents claim, rather than all possible devices that incorporate those

those claims together (Amazon’s Br. at 14–20), the Court focuses its analysis on Claim 1 of the ’720 Patent, which the Court finds to be representative.

embodiments. The Court need not discuss the *Wands* factors to conclude that this does not suffice. Amazon thus fails to establish that the Asserted Patents do not enable their “speech recognition engine” limitations at the summary judgment stage.

b. Natural Language Interpretation

Amazon’s second argument for non-enablement focuses on the “parser” requirements of the ’006 and ’720 Patents. A representative example can be found in Claim 1 of the ’720 Patent:

[A] parser that interprets the recognized words or phrases, wherein the parser uses at least the data received from the plurality of domain agents to interpret the recognized words or phrases, wherein the parser interprets the recognized words or phrases by:

determining a context for the natural language speech utterance;

selecting at least one of the plurality of domain agents based on the determined context; and

transforming the recognized words or phrases into at least one of a question or a command, wherein the at least one question or command is formulated in a grammar that the selected domain agent uses to process the formulated question or command[.]

’720 Pat. col. 32, ll. 51–64.¹³

Amazon argues that this limitation, like the other “parser” requirements of the ’006 and ’720 Patents, purportedly covers “Alexa’s Natural Language Understanding (NLU) component” but does not enable the technology on which it depends. (Amazon’s Sealed Br. at 20.)

Specifically, Amazon contends that Alexa’s NLU interprets words by [REDACTED]

¹³ The Court believes that this language adequately represents the other “parser” limitations of the ’006 and ’720 Patents. Indeed, those other limitations provide even less specificity for the method to be applied; for instance, Claim 10 of the ’006 Patent requires “parsing, at a parser coupled to the processing device, information relating to the utterance to determine a meaning associated with the utterance and a context associated with the request contained in the utterance.” ’006 Pat. col. 30, ll. 4–7.

[REDACTED]. (*Id.* at 20–21.) Dialect responds that the claims “require a parser . . . that meets specific requirements and purposes . . . and do not once mention neural network models or machine learning.” (Dialect’s Opp. at 19.)

Amazon’s second argument proves stronger than its first, but it fails to warrant summary judgment. To begin, the “parser” limitations, unlike the “speech recognition engine” limitations discussed in the previous section, use language broadly enough to capture all or nearly all of the techniques that Amazon contends are not enabled. In other words, the scope of the ’006 and ’720 Patents comprises methods and systems whose “parsers” “analyze[] a string of words” using deep neural networks. *Dialect, LLC v. Amazon.com, Inc.*, 2024 WL 1859806, at *22 (E.D. Va. Apr. 29, 2024) (construing the term “parser”). Accordingly, the specifications of these patents must enable a person of ordinary skill in the art to practice their claimed inventions using deep neural network technology.

Amazon asserts that this conclusion ought to doom the “parser” claims, because the ’006 and ’720 Patents “contain no description of any deep neural network models.” (Amazon’s Sealed Br. at 21.) In response, Dialect contends that such technology has been “well known in the field of computer science and natural language understanding since before the filing dates of the NLU Patents.” (Dialect’s Opp. at 20.) Amazon assumes the truth of that assertion but nevertheless insists that no background knowledge of the techniques involved here can “‘substitute for a basic enabling disclosure’ within the specification explaining how machine learning could be implemented to interpret words.” (ECF No. 385 (“Amazon’s Reply”) at 18 (quoting *Auto. Techs. Int’l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1283–84 (Fed. Cir. 2007))).

Amazon's argument proves unpersuasive. Amazon cites case law stating that "the enabling disclosure [of an invention] must appear in the specification at the time of filing." (Amazon's Br. at 22 (quoting *MagSil Corp. v. Hitachi Glob. Storage Techs., Inc.*, 687 F.3d 1377, 1382 (Fed. Cir. 2012))). No party contends otherwise. However, Amazon's briefs elide what, precisely, constitutes "the enabling disclosure." The Federal Circuit has been clear that specifications "need not teach, and preferably omit[], what is well known in the art" at the time of filing. *McRO II*, 959 F.3d at 1102 (quoting *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1534 (Fed. Cir. 1987)). Amazon's own authority clarifies that the background knowledge of skilled artisans does not change the rule that "'the specification . . . must supply the novel aspects of an invention'" — in other words, its "essential concept." *Auto. Techs.*, 501 F.3d at 1283 (quoting *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997)). Amazon never argues that the '720 and '006 Patents' "parser" limitations constitute those patents' "novel aspects" or "essential concept[s]." *Id.* Accordingly, Dialect may rely on artisans' background knowledge to demonstrate that the '720 and '006 Patents enable their inventions.

Drawing all reasonable inferences in Dialect's favor and remaining mindful of Amazon's heavy "clear and convincing" burden of proof, the Court cannot say that the "parser" limitations cause the '006 and '720 Patents to fail for lack of enablement. Dialect presents testimony from its expert, Dr. H. V. Jagadish, to support its assertion that neural network and machine learning technologies were known well enough in the art to enable an artisan of ordinary skill to apply them to the '006 and '720 Patents without unreasonable experimentation. (Dialect's Opp. at 20.) The Court finds that a jury could reasonably rely on that testimony to conclude that Amazon failed to prove its defense by clear and convincing evidence. That conclusion precludes summary judgment.

At trial, Amazon can introduce evidence addressing the *Wands* factors, and it can ask a jury to hold that the Asserted Patents do not enable methods and systems that parse and interpret words using machine learning and deep neural networks. However, its evidence and argument carry insufficient force to overcome the challenging burden that it faces at this stage.

C. Pre-Suit Damages

The Court concludes by resolving Amazon's third argument as moot. Amazon claims that Dialect cannot recover pre-suit damages because it failed to comply with the "marking" requirement of 35 U.S.C. § 287(a). (Amazon's Br. at 24–27.) Specifically, Amazon contends that Dialect cannot recover pre-suit damages for the '720, '957 and '327 Patents. With respect to the '327 Patent, the parties no longer present a justiciable controversy, because the Court has granted Amazon summary judgment of noninfringement on all claims of that patent. (ECF No. 394 at 1.) With respect to the others, Dialect "does not contend" that it can recover pre-suit damages for infringement of the '720 and '957 Patents. (Amazon's Br. at 24 (quoting ECF No. 312-3 (Amazon's Br. Ex. 3) at 73).) "A party who identifies an issue, and then explicitly withdraws it, has waived the issue." *United States v. Council*, 77 F.4th 240, 256 (4th Cir. 2023) (quoting *United States v. Robinson*, 744 F.3d 293, 298 (4th Cir. 2014)). Dialect's express disavowal of pre-suit damages for the '720 and '957 Patents matches that test; with respect to those patents, the pre-suit damages issue has been waived. As a result, addressing Amazon's § 287(a) argument would serve no purpose, and the Court will deny that portion of Amazon's motion as moot. (See ECF No. 394 at 1–2 (doing the same with respect to Dialect's motion for summary judgment).)

IV. CONCLUSION

The preceding analysis leads the Court to draw the following conclusions. First, Dialect's § 271(f) theory of liability fails to present a triable question of fact, thereby precluding

damages related to foreign sales. Second, Amazon's enablement theory of invalidity, which must overcome a demanding legal standard in this posture, does present such a dispute; the enablement question will be resolved at trial. Lastly, Amazon's marking defense must be disregarded as moot.

An appropriate Order shall issue.

Let the Clerk file a copy of this Memorandum Opinion and notify all counsel of record.

The Court directs the Clerk to file this Memorandum Opinion under seal pending proposed redactions by the parties.



/s/
David J. Novak
United States District Judge

Richmond, Virginia

Date: August 21, 2024